

PRODUCTION, PLANNING and CONTROL

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INTRODUCTION

Production



Process of Conversion of Raw material
/semi finished goods



Finished goods

What is PPC ?

A production (or manufacturing) planning and control (PPC) system is concerned with planning and controlling all aspects of manufacturing, including materials, scheduling machines and people, and coordinating suppliers and customers.

An effective PPC system is critical to the success of any company.

An PPC system's design is not a one-off undertaking; it should be adaptive to respond to changes in the competitive arena, customer requirements, strategy, supply chain and other possible problems



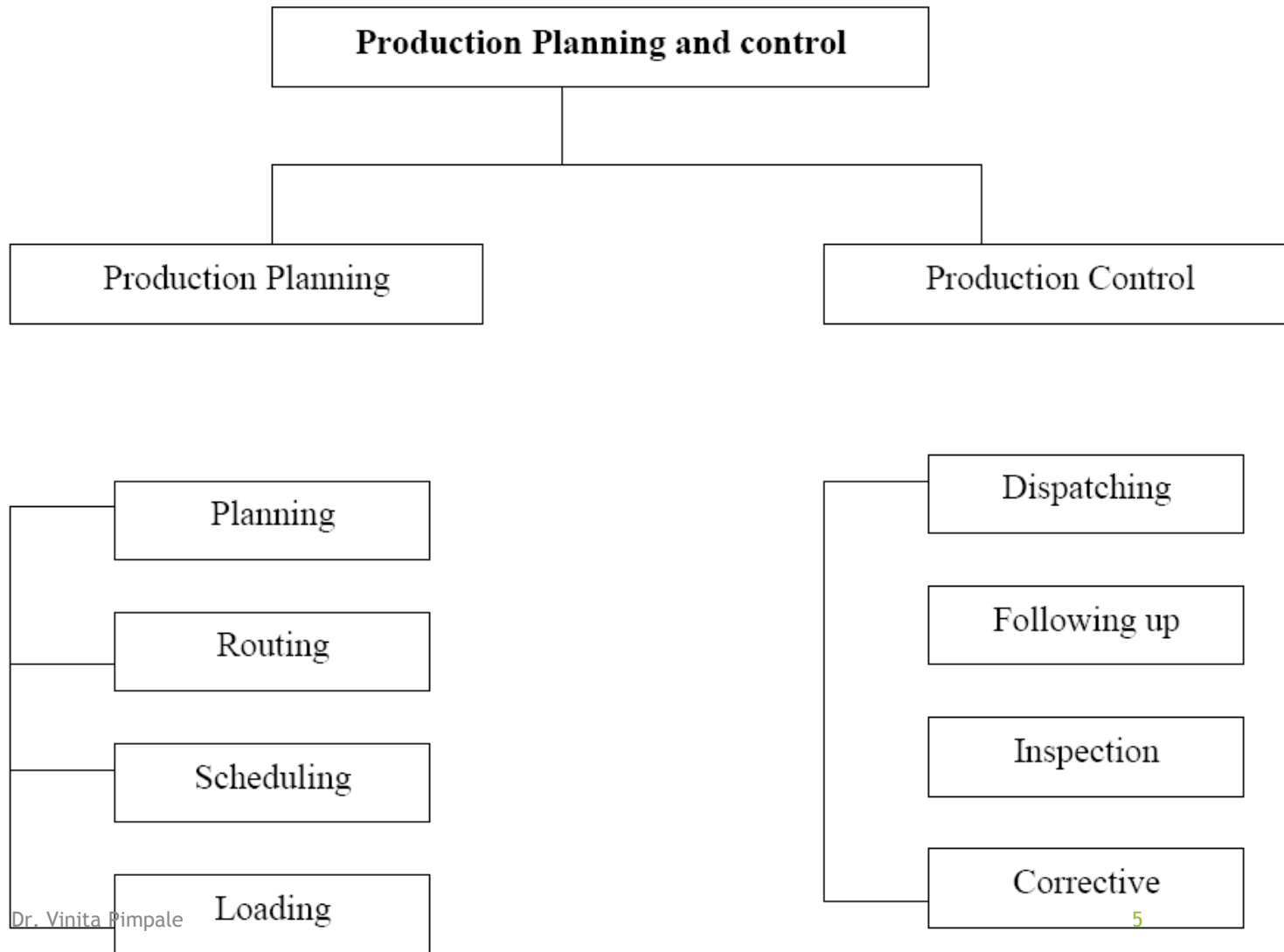
Objectives of PPC

The ultimate objective of production planning and control, like that of all other manufacturing controls, is to contribute to the profits of the enterprise.

As with inventory management and control, this is accomplished by keeping the customers satisfied through the meeting of delivery schedules.

Specific objectives of production planning and control are to establish routes and schedules for work that will ensure the optimum utilization of materials, workers, and machines and to provide the means for ensuring the operation of the plant in accordance with these plans.

Functions of PPC



Planning

Process Planning (Routing)

The determination of where each operation on a component part, subassembly, or assembly is to be performed results in a route for the movement of a manufacturing lot through the factory.

Loading

Once the route has been established, the work required can be loaded against the selected machine or workstation. The total time required to perform the operation is computed by multiplying the unit operation times given on the standard process sheet by the number of parts to be processed. This total time is then added to the work already planned for the workstation.

Scheduling

Scheduling is the last of the planning functions. It determines when an operation is to be performed, or when work is to be completed; the difference lies in the detail of the scheduling procedure. In a centralized control situation - where all process planning, loading, and scheduling for the plant are done in a central office- the details of the schedule may specify the starting and finishing time for an operation. On the other hand, the central schedule may simply give a completion time for the work in a given department.

Control :

Dispatching

Authorizing the start of an operation on the shop floor is the function of dispatching. This function may be centralized or decentralized.

For example, the departmental dispatcher would authorize the start of each of the three machine operations – three dispatch actions based on the foreman's routing and scheduling of the work through his department. This is decentralized dispatching.

Reporting or Follow – up

The manufacturing activity of a plant is said to be “in control” when the actual performance is within the objectives of the planned performance.

Optimum operation of the plant, however, is attained only if the original plan has been carefully prepared to utilize the manufacturing facilities fully and effectively.

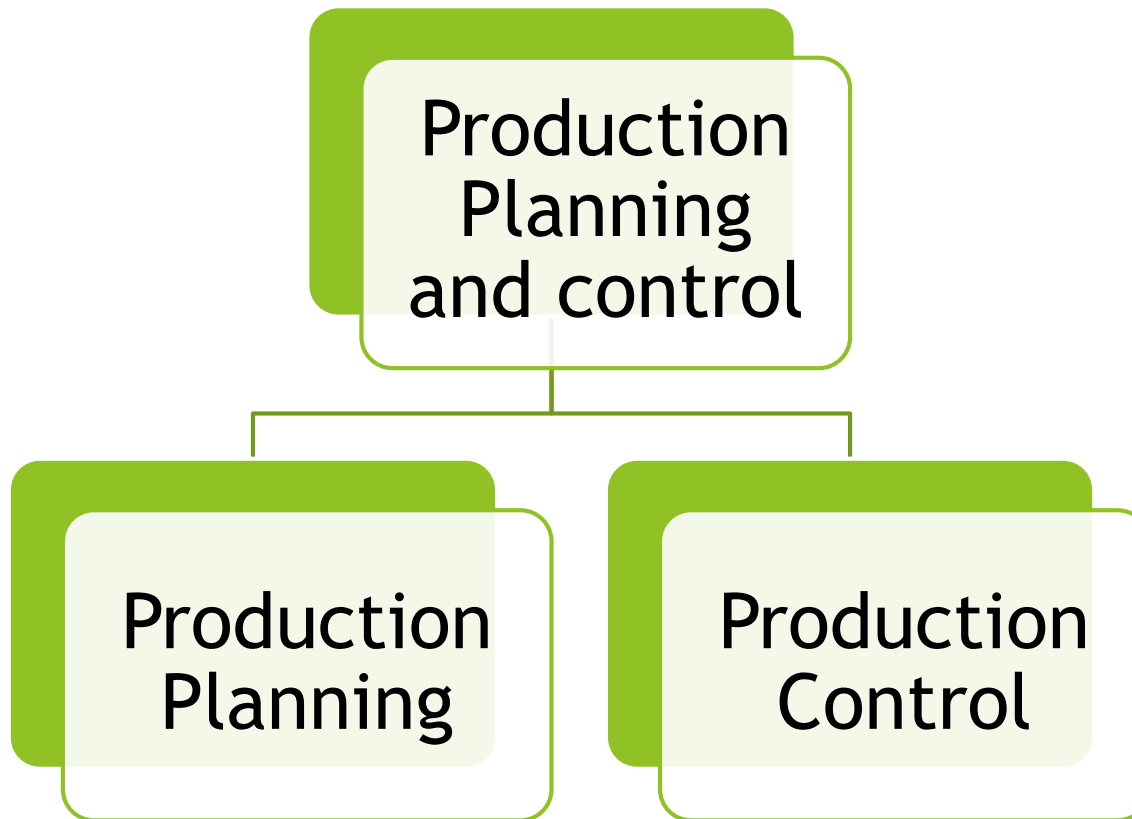
Corrective Action

This is the keystone of any production planning and control activity. A plant in which all manufacturing activity runs on schedule in all probability is not being scheduled to its optimum productive capacity.

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With an optimum schedule, manufacturing delays are the rule, not the exception.

Production Planning and control



BENEFITS OF PPC

Optimum
utilization of
capacity

Inventory
Control

Economy in
product line

Ensure Quality

Production Control

- ▶ It regulates & stimulates the orderly flow of materials in the manufacturing process from beginning to end.
- ▶ Production planning without production control is like a bank without a bank manager.
- ▶ Planning initiates action while control is an adjusting process, providing corrective measures for planned development.

Production Planning

Planning

Routing

Scheduling

Loading

Production Control

Dispatching

Following up

Inspection

Corrective

The following performance criteria by which production planning and control systems might be judged:

1. Inventory turnover
2. Delivery lead time
3. Percent of time meeting delivery promises
4. Percent of orders requiring “splits” because of unavailable material.
5. Number of expeditors
6. Average unit cost.

Production Planning and control at Godrej



Godrej is India's well known corporate organization . Its growth story marks a remarkable effort in production planning and control technique. Adi Godrej , founder of Godrej company says that without implementing PPC it is difficult for a manufacturing unit or business to survive in such a competitive world with the era of globalisation.

PPC at Godrej

Godrej has been using PPC in the following areas :

1. Market forecast
2. Sales order
3. Stock order
4. Shop order
5. Standard process sheet
6. Engineering Specifications
7. Route sheet
8. Load chart



Measurement of Effectiveness

1. Inventory turnover
2. Delivery lead time
3. Percent of time meeting delivery promises
4. Percent of orders requiring “splits” because of unavailable material.
5. Number of expeditors
6. Average unit cost.

Conclusion

Thus , Production Planning and Control (PPC) as its definition goes is very important for planning and controlling all aspects of manufacturing, including materials, scheduling machines and people, and coordinating suppliers and customers and Godrej has been successfully using it and has shown a good amount of growth in its business because of it.

THANK YOU